DOCUMENT RESUME

ED 451 558 CS 510 523

AUTHOR	Lake-Jones, Felicia
TITLE	The Effect of Positive Verbal Reinforcement on the Study Behavior of Eighth Grade Students.
PUB DATE	2001-05-00
NOTE	41p.; Master of Arts Thesis, Kean University.
PUB TYPE	Dissertations/Theses - Masters Theses (042)
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Grade 8; Incentives; Interpersonal Communication; *Middle School Students; Middle Schools; *Positive Reinforcement; *Student Behavior; *Study Skills; *Teacher Behavior; Teacher Student Relationship

ABSTRACT

This study was conducted in order to investigate the effect of verbal reinforcement on the study behavior of eighth grade students. Twelve middle school students participated. The target students were observed fifteen minutes a day, three days per week. Study behavior was noted with a check or a zero. If the subject was participating in class the majority of the observation period, the observer put a check in her grade book next to the student's name that day for class participation. If a subject was not participating in class the majority of the observation period, the observer put a zero in her grade book next to the student's name for that particular day. The results indicated that positive verbal reinforcement did have an effect on the behavior of eighth grade students. (Contains 20 references and 2 tables of data.) (Author/RS)

Reproductions supplied by EDRS are the best that can be made
from the original document.

ED 451 558

The Effect of Positive Verbal Reinforcement on the Study Behavior of Eighth Grade Students

By Felicia Lake-Jones

In Partial Fulfillment of the Requirement for the Degree of
Master of Arts in Reading Specialization
Kean University of New Jersey

May, 2001

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☐ This document has been reproduced as received from the person or organization originating it.
☐ Minor changes have been made to improve reproduction quality.
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

BEST COPY AVAILABLE

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY
F. Lake-Jones
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

CS 510 523

Acknowledgements

I would like to give praise to my Heavenly Father who continuously guides me through the "highways and byways of life." Mom and dad, I love you. You are the potters and I am the clay. I hope that my accomplishments make you as proud of me as having you as parents makes me. To my loving husband, you are my strong tower. Without you, where would I be? God knew just when I would need you, and he sent you to me. Tara, you are my biggest fan. You are always in my corner. Remember my friend, the race has just begun...

Abstract

This study was conducted in order to investigate the effect of verbal reinforcement on the study behavior of eighth grade students. Twelve middle school students participated. The target students were observed fifteen minutes a day, three days per week. Study behavior was noted with a check or a zero. If the subject was participating in class the majority of the observation period, the observer put a check in her grade book next to the student's name that day for class participation. If a subject was not participating in class the majority of the observation period, the observer put a zero in her grade book next to the student's name for that particular day. The results indicated that positive verbal reinforcement did have an effect on the behavior of eighth grade students.

Table of Contents

I. The Effect of Positive Verbal Reinforcement on the Study Behavior of Eighth Grade Students

A. Introduction p. 1

B. Hypothesis p. 7

C. Procedure pp. 7-8

D. Results pp. 8-9

E. Conclusions & Implications pp. 8-10

II. Verbal Reinforcement and Study Behavior: Related Literature

III. References pp. 31-33

IV. Appendix pp. 34

Table of Tables

Table II pg. 35

One of the main goals of educators is to teach children important behaviors (Taffel, O'Leary, & Armel, 1974). These codes of conduct could be categorized as academic, attending, study, and or classroom behavior. Regardless of the label, these behaviors are significant due to the fact that they are linked to scholarly achievement (Taffel et al., 1974; Cossairt, Hall, & Hopkins, 1973; Hall, Lund, & Jackson, 1968). The question then becomes how can teachers modify their own behavior in order to control student behavior (Cossairt et al., 1973). Several investigations have demonstrated the effectiveness of praise on the study behavior of elementary school students (Cossairt et al., 1973; Hall et al., 1968; Madsen, Jr., Becker, & Thomas, 1968; Thomas, Becker, & Armstrong, 1968).

An investigation by Taffel et al. (1974) studied the effects of reasoning on academic behavior. It assessed the effectiveness of reasoning by comparing it to another experimental group that was praised and a control group that was given neither praise nor reasons. The subjects were 30 second graders, 15 males and 15 females. They were students at a public elementary school in a white, middle-class suburban community. Four math worksheets and a booklet of grade-appropriate arithmetic problems were presented to each

subject. Students were given a total of four reasons or four praise statements after the completion of the four worksheets, depending on the condition. The control subjects did not receive verbal comments from the experimenter. The dependent variables were the amount of time subjects spent independently working on the booklet, and the number of problems correctly completed in the booklet. Results indicated that the reasoning condition and the praise condition did significantly more problems correctly than the control condition. "The subjects in the reasoning condition did better than the subjects in the praise condition." As far as the time subjects spent working independently, "only the reasoning condition was significantly different from the control condition."

Another study conducted by Cossairt et al. (1973) examined the effects of experimenter's instructions, feedback, and praise on teacher praise and student attending behavior. The subjects were 2 fourth grade teachers, 1 third grade teacher, and 12 students, 5 boys and 7 girls. The target students were chosen by teachers because of their difficulty with attending and following instructions. Two math sheets were used. "Each math sheet

consisted of five rows of addition and subtraction problems without signs. Teachers read specific instructions aloud for each row to the class." Math sessions were 15 minutes long. Notes on student attending were taken during teacher's instructions. After instructions were given, teacher praise and teacher's responses to non-attending behavior were noted. "The experimenter had a post-session conference with the teacher after each session of the experiment." Post session conferences were taped. Experimenter's positive comments for teacher praise were recorded on a separate sheet. The Instruction condition included reinforcing students' attentive behavior through teacher praise. The Feedback condition involved the experimenter reporting on the attentive behavior of students and teacher praise given in response to this behavior. The Feedback plus social praise included teachers being given praise for their reinforcement of student attending behavior and the report of attentive student behavior and teacher praise. In the Package condition, the experimental conditions occurred concurrently. Results indicated that instructions increased teacher praise. Students attending behavior increased throughout the Feedback conditions. In the Package condition, teachers' rates of praise increased. Social praise

encourages teacher praise behavior.

Hall et al. (1968) conducted a study of the effects of teacher attention on study behavior. The study included 6 subjects in the primary grades, 4 boys and 2 girls. They were students in two elementary schools in Kansas City, Kansas. Teachers chose these pupils because they exhibited disruptive or idle behavior. One or two observers used recording sheets to note behavior of each subject, teacher attention and teacher proximity to the subject. These notations were made in 10 second-intervals during 30-minute observations, two to four times per week. Results indicated that the contingent use of teacher attention could be an effective way to develop desired classroom behavior.

Furthermore, a study by Madsen, Jr. et al. (1968) examined the effects of rules, praise, and ignoring on classroom behavior. The subjects were 29 second grade children and 20 kindergarten children in a public elementary school. The three target children, all boys, were chosen because they frequently displayed problem behavior. Two observers rated each child's behavior for 20 minutes a day, three days a week. Observers watched for 10 seconds and used symbols to record behaviors. During each minute, ratings

would be made in five consecutive 10 second intervals. The final 10 seconds were used for recording comments. The dependent variable was the percentage of intervals in which an inappropriate behavior occurred. Results indicated that rules in isolation have little effect in improving classroom behavior. The combination of ignoring inappropriate behavior and praising appropriate behavior was effective in achieving better classroom behavior. Praise for appropriate behaviors was the most effective teacher behavior in achieving effective classroom management.

The study of Thomas et al. (1968), examining the effects of teacher behaviors on classroom behavior, methodically changed approving and disapproving classes of teacher behavior. The subjects were 28 elementary students in a "middle-primary" public school class. The majority of the students were from "upper-middle and middle income range families." The teacher was 23 years old. One, two, or three observers went into the classroom for 45 minutes while students were completing reading class work. Teacher and student observations were 20 minutes each. Ten children were chosen randomly each morning. Each target child was observed for 2 minutes. Minutes were divided into six 10-second intervals.

During the first five intervals of each minute, recordings were made. Teacher behaviors were recorded in a similar fashion. Materials included a clipboard, stopwatch, a recording sheet with a place for comments, and reliability guides. Classes of teacher behaviors were the independent variable. Student behaviors were the dependent variable. Results indicated that when the teacher's Approving Behavior ceased, students' Relevant Behavior decreased. Students' Relevant Behavior increased whenever the teacher's Approving Behavior was reintroduced. Frequent Disapproval by the teacher caused increases in some undesirable student behaviors and decreases in others. Praising select children only helps those particular children develop relevant behaviors, not the ones that have not been praised.

The present study is based on prior research that showed the link between positive reinforcement and academic behavior. However, this study is distinctive due to the fact that it examines the effect of positive verbal reinforcement on the study behavior of middle schools students, unlike previous studies that strictly dealt with students in grades K-4. On the middle school level, the issue of sincerity comes into play. Will eighth grade students believe that a teacher's praise statements are genuine? The

answer to that question will most certainly affect the way subjects respond to reinforcement.

Hypothesis

The present study was designed to test the hypothesis that positive verbal reinforcement will significantly affect the study behavior of eighth grade students. Positive verbal reinforcement will encourage disaffected students to engage in study behavior.

Procedures

The twelve target students were observed fifteen minutes a day, three days a week. During week one subjects were given positive verbal reinforcement when they were observed engaging in study behavior. Study behaviors were noted with a check or a zero. If a subject was participating in class the majority of the observation period, the observer put a check in her grade book next to the student's name that day for class participation. If a subject was not participating in class the majority of the observation period, the observer put a zero in her grade book next to the student's name for that particular day. The second week no positive reinforcement was given to

students who participated during class. Observations of target students' study behavior were again noted under class participation in the observer's grade book using checks and zeros. The following week subjects once again received positive reinforcement in the same manner they did during week one of the experiment. Observations were noted as previously mentioned. The fourth week no positive reinforcement was given to students who participated during class. Observations were noted. The results were statistically analyzed to determine if positive verbal reinforcement has a significant effect on the study behavior of eighth grade students.

Results

As can be seen in Table I, while there was only a difference of .75 between the means of the samples' behavior under the two treatments, this difference was statistically below the .05 level.

Conclusions

The results indicated that positive verbal reinforcement did have an effect on the behavior of eighth grade students. The study behavior of the target

Table I

Means, Standard Deviations and t of the Samples' Pre-Experiment Scores

Sample	M	SD	t
Praise	5.67	.49	2.34
No Praise	4.92	1.00	

significant < .05

students increased when positive verbal reinforcement was provided and decreased when positive verbal reinforcement was not provided.

The present study has demonstrated that praise can be used to reinforce the study behavior of middle school students. In order to maximize the effect of positive verbal reinforcement the reinforcer must be vigilant, consistent, and exert effective effort. Teachers will find that if they take the time to praise students for desired behaviors, they will spend less time reprimanding students for undesirable ones. When individual students are praised, surrounding students observe the teacher's response and have a tendency to adjust their behavior, without any explicit direction, in order to insure that

their behavior falls in line with the students who were praised. Praise can be offered by school personnel, parents, and community members not only within educational settings, but in settings outside of school as well.

Implications

The concept of intrinsic motivation seems to elude today's youth. How does an educator teach students how to motivate themselves? Can it be done? On the other hand, there is extrinsic motivation. Students seem to be more receptive to extrinsic motivation, almost to a fault. An increasing number of students who do not do have any extrinsic motivation to do well in school, simply do not. Thus, the significance of positive verbal reinforcement becomes evident. In the middle grades some students begin to dislike school. However teachers, particularly middle school teachers, who use praise effectively can reverse this feeling through encouragement which can promote appropriate academic behavior which could result in school success which in turn makes school more enjoyable and builds self-esteem.

VERBAL REINFORCEMENT AND STUDY BEHAVIOR: RELATED LITERATURE

A study as early as 1958 on the effects of teacher comments on student test performance was conducted by Page. The study included 2,139 students in grades seven through twelve from three school districts in San Diego City and County Schools. Teachers gave an objective test that they would normally give under normal circumstances. They corrected and scored the test papers and "matched the students by performance." Test papers were randomly placed into three groups: No Comment, Free Comment, and Specified Comment. The No Comment group of students received only grades on their papers. The Free Comment group received whatever comment the teachers felt was applicable. The Specified Comment group received "encouraging comments prepared by the experimenter for all similar letter grades." Test papers were returned to the students. When the next objective test was given, teachers reported student grades. Results indicated that the Free Comment group earned higher scores than the Specified Comment group. The Specified Comment group did better than the No Comment group. The only difference that was not significant was the one between the Free Comment and Specified Comments group.

A later study conducted by Sechrest (1963) investigated "the effect on

children working in pairs of either positive or negative reinforcement administered to their pairmates." Kindergarten, first, second, and third grade children were chosen from three different schools. Teachers coupled children with similar abilities into "same-sex pairs." In each pair, each child worked on a slightly challenging jigsaw puzzle. Control groups received no reinforcement. In experimental groups, one member of the couplet was randomly chosen to receive a positive or negative comment. When both children finished their individual puzzles "experimental manipulation" went into effect. Then the children switched puzzles. Results indicated that positive and negative reinforcement had a significantly contrasting effect. Positive reinforcement prompted children to increase work faster on the second puzzle. The "implicitly positive group" was the only group that differed significantly from the control group.

A study by Montrose (1966) examined the effects of token reinforcement on the performance of remedial students. The subjects were 2 sixth grade students who "scored at least two years below their grade level on the reading portion of the Standard Achievement Test. One completed sections in the New Practice Readers at a high rate and one did not." Subjects

attended an elementary school in a low-income area of Kansas City, Kansas. Folders with sections of four different colored pages were used to keep track of the points given by the teacher after each assignment. Different colors represented different types of prizes. When a page in the folder was filled, the points could be traded in for goods and events. Results indicated that the points were effective reinforcers.

In 1967 O'Leary and Becker investigated the effects of token reinforcement on deviant behavior. The subjects were 17 emotionally disturbed 9 year-olds who were placed in an adjustment class because of their disruptive behavior. Eight children, the most disruptive, were the focus of the study. A baseline of deviant behaviors was established. Children received ratings from 1-10 that indicated how well they behaved during the individual lessons. The teacher provided positive reinforcement while recording ratings in student booklets. The teacher determined the amount of points needed to earn prizes. Reinforcers were small prizes such as candy, comics, and kites. Results indicated that the average deviant behavior for the class dropped from 76% during the baseline to 10% during the token period. Informal reports indicated that once the token period began, children's

behavior improved during music and library periods.

Another study by Allen, Henke, & Harris (1967) studied the effect of social reinforcement on hyperactivity. The subject was a 4 year-old male preschooler whose average time spent on one activity was one minute. The baseline rate of activity was recorded. Verbal reinforcement was given when attending behavior lasted an entire minute, and it was continued until the subject shifted to another activity. Once the attending behavior increased, a reversal procedure was put into effect. The effects of the change were noted. Verbal reinforcement was reintroduced. Once attending behavior increased again, verbal reinforcement was given after 2 minutes of attending behavior. Attending behavior and adult verbal reinforcement were recorded. A flashlight placed on top of a metal clip of a clipboard was used to signal teachers as to when they should provide verbal reinforcement. Results indicated that when adult verbal reinforcement was contingently given as a result of sustained attending behavior, the number of activity shifts reduced to half the number that occurred during the baseline and reversal stages.

Whitlock & Bushell, Jr. in 1967 examined the effects of "back-up

reinforcers" on reading behavior. The subject was a 6 year-old first grader in Westgroves, Missouri. She was labeled a slow reader and scored "below the average reading grade level of her class..." The subject was asked to read text written on 3X11 index cards during 30-minute sessions. Reading the text correctly was considered a correct response. Response time was measured. Verbal praise was given after each correct response. During the treatment sessions an electric counter conspicuously moved forward after each correct response. During the reversal, the counter did not move forward after correct responses. Results indicated that the counter was an effective reinforcer in the beginning of the experiment. However after the reversal and then the reinstatement of reinforcement, the response rate remained low. So, "back-up reinforcers" such as notebooks and coloring books were introduced. "Under the Counter With Back-Ups Phase of the experiment, 100 or more correct responses were emitted during four of the six sessions."

The study of Thomas, Becker, & Armstrong (1968), examining the effects of teacher behaviors on classroom behavior, methodically changed approving and disapproving classes of teacher behavior. The subjects were

28 elementary students in a "middle-primary" public school class. The majority of the students were from "upper-middle and middle income range families." The teacher was 23 years old. One, two, or three observers went into the classroom for 45 minutes while students were completing reading class work. Teacher and student observations were twenty minutes each. Ten children were chosen randomly each morning. Each target child was observed for 2 minutes. Minutes were divided into six 10-second intervals. During the first five intervals of each minute, recordings were made. Teacher behaviors were recorded in a similar fashion. Materials included a clipboard, stopwatch, a recording sheet with a place for comments, and reliability guides. Classes of teacher behaviors were the independent variable. Student behaviors were the dependent variable. Results indicated that when the teacher's Approving Behavior ceased, students' Relevant Behavior decreased. Students' Relevant Behavior increased whenever the teacher's Approving Behavior was reintroduced. Frequent Disapproval by a teacher caused increases in some undesirable student behaviors and decreases in others. Praising select children only helps those particular children develop relevant behaviors, not the ones that have not been praised.

Hall, Lund, & Jackson (1968) conducted a study of the effects of teacher attention on study behavior. The study included 6 subjects in the primary grades, 4 boy and 2 girls. They were students in two elementary schools in Kansas City, Kansas. Teachers chose these pupils because they exhibited disruptive or idle behavior. One of the two observers used recording sheets to note behavior of each subject, teacher attention, and teacher proximity to the subject. These notations were made in 10 second-intervals during 30-minute observations, two to four times per week. Results indicated that the contingent use of teacher attention could be an effective way to develop desired classroom behavior.

Furthermore, a study by Madsen, Jr., Becker, & Thomas (1968) examined the effects of rules, praise, and ignoring of classroom behavior. The subjects were 29 second grade children and 20 kindergarten children in a public elementary school. The three target children, all boys, were chosen because they frequently displayed problem behavior. Two observers rated each child's behavior for twenty minutes a day, three days a week. Observers watched for 10 seconds and used symbols to record behaviors. During each minute, ratings would be made in five consecutive 10 second

intervals. The final 10 seconds were used for recording comments. The dependent variable was the percentage of intervals in which an inappropriate behavior occurred. Results indicated that rules in isolation have little effect in improving classroom behavior. A combination of ignoring inappropriate behavior and praising appropriate behavior was effective in achieving better classroom behavior. Praise for appropriate behaviors was the most effective teacher behavior in achieving effective classroom management.

A study by Walker & Buckley (1968) examined the effects of positive reinforcement on attending behavior. The subject was a 9 year-old fourth grader who was a disruptive force in the classroom. He attended to tasks about 42% of the time. A baseline was established and then treatment sessions began. The materials used during the sessions were programmed math materials (Lessons for Self-Instruction in the Basic Skills). Sessions were 40 minutes a day, 5 days a week. Sessions were broken down into 10-minute segments with 3-minute breaks after the first and second 10-minutes segments. Each time there was a period of time with no distractions a click would occur and the experimenter would provide verbal praise as he or she

entered a check on the record sheet to indicate that the subject earned a point. Points could be exchanged for a preferred model at the end of a session. One hundred sixty points were required to earn a model. "The response measure was established..." Then a reversal was put into effect after the three distraction-free 10-minute segments. Results indicated that manipulation of positive reinforcement caused significant changes in attending behavior. During the reversal period, attending behavior dropped to baseline levels.

Mckenzie, Clark, Wolf, Kothera, & Benson (1968) studied the effects of a "pay for grades token reinforcement system" on the academic behavior of learning disabled children. The subjects were 10 learning disabled students (8 boys, 2 girls) who attended elementary school in Shawnee Mission, Kansas. Their ages ranged from 10 years old to 13 years old. Students were selected because they exhibited at least a 2-year delay in one or more of their academic classes. Subjects worked on programmed materials or workbook assignments. A research assistant observed the subjects for three hours every morning through a one way mirror. Observations of attending and teacher and aid behavior were noted. The reading period was about 80

minutes and arithmetic period was about 60 minutes long. Baseline incentives included: recess; free time activity; special privileges, group versus individual lunch; teacher attention; and weekly grades. Incentives used during the baseline period were continued during the pay period. However, payment of weekly allowance was dependent upon subjects' grades in all subject areas. Results indicated significant increases in attending to reading and math from the baseline to the pay period.

A study by Henning (1968) examined the effects of teacher verbal reinforcement on achievement test scores. Two kindergarten and two first grade classes were used. A sample of 38 children was randomly selected. One kindergarten and one first grade class made up the control group. The second kindergarten and second first grade class made up the experimental group. Pretesting occurred in December and included the use of the Caldwell-Soule, the Peabody Picture Vocabulary Test, and the Pintner-Cunningham. The experimental teachers were trained to systematically give reinforcement. The control teachers were not. A baseline was established to determine the rates at which the four teachers gave positive reinforcement. Observations were done 24 days, for 15-30 minutes, during

a sixteen-week period. Posttesting occurred in May using the Caldwell-Soule and the Peabody Picture Test. The dependent variable was the change in Caldwell-Soule scores. The Pintner-Cunningham and the Peabody pretests remained fixed. Results indicated that experimental group's total gain on the Caldwell-Soule was significant beyond the .05 level. Thus, "systematic teacher reinforcement" did have an effect on achievement test scores.

O'Leary, Becker, Evans and Saudargas (1969) examined the effect of token reinforcement on disruptive behavior. The subjects were 7 second graders who exhibited disruptive behavior. Each child was observed three days a week, 20 minutes a day. The teacher was observed for 90 minutes, two days a week. The dependent variable was the percentage of intervals in which disruptive behavior was noted. A baseline of disruptive behavior was established over a six-week period. Then the separate effects of classroom rules, educational structure, teacher praise, and a token reinforcement program measured. Results indicated that token reinforcement had a significant effect on reducing disruptive behavior.

Nesslroad & Vargas (1970) examined the "effects of points exchangeable for

grades as a reinforcer" for high school study behavior. The subjects were twelve students randomly selected from a tenth grade biology class. Students mainly came from lower-class homes. Observers noted the study behavior. During Phase I the baseline study behavior rate was established. During Phase II students were given a point record and were informed that initials given for study behavior could increase their grade. Rows were observed randomly. Each student who was observed engaging in study behavior when their row was observed earned an initial. During Phase III students received initials at the start of the day whether they were engaged in study behavior or not. During Phase IV students had to once again earn the initials. Results indicated that the average amount of study behavior rose when points were given and dropped when they were not given.

A study by Lawlor (1970) examined the effect of verbal rewards on the problem-solving behavior of second grade students. The subjects included 98 male and 93 female students from nine classrooms in four buildings located in a middle class suburban school district. Subjects were randomly put into 3 groups: a no reward group; a contingent reward group; and a non-contingent reward group. The Wooden Block Task and the People Blocks

were the materials used. Subjects were tested individually by experimenters. Each subject experienced the Wooden Block Task and the People Blocks. Experimenters noted "perseverance time," sorting sequence, reward amount, and children's descriptions of their sortings. Results indicated that non-contingent verbal rewards led to less skilled problem solving than no rewards and the contingent rewards did. Contingent rewards improved problem solving skills for girls, but not boys.

Another study conducted by Cossairt, Hall & Hopkins (1973) examined the effects of experimenter's instructions, feedback, and praise on teacher praise and student attending behavior. The subjects were 2 fourth grade teachers, 1 third grade teacher, and 12 students, 5 boys and 7 girls. The target students were chosen by teachers because of their difficulty with attending and following instructions. Two math sheets were used. "Each math sheet consisted of five rows of addition and subtraction problems without signs. Teachers read specific instructions aloud for each row to the class." Math sessions were about 15 minutes long. Notes on student attending were taken during teacher's instructions. After instructions were given, teacher praise and teacher's responses to non-attending behavior were noted. "The

experimenter had a post-session conference with the teacher after each session of the experiment." Post session conferences were taped. Experimenter's positive comments for teacher praise were recorded on a separate sheet. The Instruction condition included reinforcing students' attentive behavior through teacher praise. The Feedback condition involved the experimenter reporting on the attentive behavior of students and teacher praise given in response to this behavior. The Feedback plus social praise included teacher being given praise for their reinforcement of student attending behavior and the report of attentive student behavior and teacher praise. In the Package condition, the experimental conditions occurred concurrently. Results indicated that instructions increased teacher praise. Students attending behavior increased throughout the Feedback conditions. In the Package condition, teachers' rates of praise increased. Social Praise encourages teacher praise behavior.

Rupley (1976) examined the effects of behavior modification for the remediation of reading problems experienced by primary students. The subjects were 20 students who were part of a four-month remedial program. Ten were assigned to the experimental group and 10 were assigned to the

control group. Baseline data was recorded regarding specific reading skills. Control teachers used games, teacher-made materials, and commercially prepared materials as part of their regular program of remedial reading instruction. The experimental group used all of these materials and behavior modification techniques such as: verbal and written praise; graphs; wall charts; and "reading hardware, and free choice reading." Appropriate oral responses were reinforced and inappropriate ones were ignored. After ten hours of instruction a post-test was given and the students resumed their normal program. Results indicated a "significant difference for experimental subjects." The experimental group "exhibited positive growth in the identified reading skill area. The control group did not reflect a significant difference in remediation at the .05 level of significance."

An investigation by Taffel, O'Leary, and Armel (1974) studied the effects of reasoning on academic behavior. It assessed the effectiveness of reasoning by comparing it to another experimental group that was praised and a control group that was given neither praise nor reasons. The subjects were 30 second graders, 15 males and 15 females. They were students at a public elementary school in a white, middle-class suburban community. Four math

worksheets and a booklet of grade-appropriate arithmetic problems were presented to each subject. Subjects were given a total of four reasons or four praise statements after the completion of the four worksheets, depending on the condition. The control subjects did not receive verbal comments from the experimenter. The dependent variables were the amount of time subjects spent independently working on the booklet, and the number of problems correctly completed in the booklet. Results indicated that the reasoning condition and the praise condition did significantly more problems correctly than the control condition. "The subjects in the reasoning condition did better than the subjects in the praise condition." As far as the time subjects spent working independently, "only the reasoning condition was significantly different from the control condition."

A study conducted by Whedall, Houghton, and Merrett (1989) examined the effects of natural rates of approval and disapproval on on-task behavior. The subjects were 130 secondary teachers in the West Midlands (Britain). Their classes had an average of 22 students each. Student ages ranged from 11 to 16 years old. Data was obtained using the Observing Pupil and Teachers in Classrooms, (OPTIC), schedule. Observations were done when

teachers and students were engaged in classroom activity. Classes were observed for 30 minutes during different periods of the day and week for a total of three sessions. Results indicated that teachers who provided more verbal reinforcement and fewer reprimands for social behavior "...experienced high levels of on-task behavior in their classroom."

A more recent study by Ferguson & Houghton (1992) examined the effects of teacher praise on on-task behavior. The subjects were 24 randomly primary students, twelve males and twelve females, from different primary schools located in the suburbs of a large Western Australian city. During intervention teachers gave at least one verbal praise to every target child during each 30-minute mathematics or English lesson. Observers noted teacher responses to students' social and on-task behavior. Then a reversal procedure went into effect. When the effect of the reversal was noted, reinforcement was reinstated. Three follow-up observations took place in the teachers' classrooms four weeks after the intervention stopped. Results indicated that teacher praise had a significant effect on on-task behavior. The levels of student on-task behavior increased from baseline to intervention.

Few studies have examined the effect of positive reinforcement on middle school students. Fewer still have investigated the effect of positive reinforcement on the study behavior of eighth grade students. It is evident that more investigations need to be done in order to find out the effect of positive reinforcement on middle school students, specifically eighth grade students.

As many middle school educators know, eighth grade is a transitional period that is quite crucial. Students are beginning to make decisions about their future educational and professional lives. High school will undoubtedly present many academic challenges. If it is possible to increase the study behavior of eighth graders through positive reinforcement, perhaps they will be more prepared to face what lies ahead of them in the years to come.

REFERENCES

Allen, K. E., Henke, L. B., Harris, F. R., Baer, D. M., & Reynolds, N. J. (1967) . Control of Hyperactivity by Social Reinforcement of Attending Behavior. Journal of Educational Psychology, 58, 231-237.

Cossairt, A., Hall, R. V., & Hopkins, B. J. (1973). The Effects of Experimenter's Instructions, Feedback, and Praise on Teacher Praise and Student Attending Behavior. Journal of Applied Behavior Analysis, 1, 89-100.

Ferguson, E., & Houghton, S. (1992). The Effects of Contingent Teacher Praise, as specified by Canter's Assertive Discipline Programme, on Children's On-Task Behaviour. Educational Studies, 18, 83-94.

Hall, R. V., Lund, D. & Jackson, D. (1968). Effects of Teacher on Study Behavior. Journal of Applied Behavior Analysis, 1, 1-12.

Henning, C. W. (1968). An Investigation of the Effects of Teacher Verbal Reinforcement as it Relates to Scholastic Aptitude and Achievement with Elementary School Children Washington, DC: Headstart Evaluation and Research Center. (ERIC Document Reproduction Service No. ED 042 494)

Lawlor, F. X. (1970). The Effect of Verbal Reward on the Behavior of Children in Primary Grades at a Cognitive Task Typical of the New Elementary Science Curriculum . Paper presented at the Annual American Research Association, Minneapolis, MN.

Madsen, C. H, Wesley, Jr., C. B., & Thomas, D. R. (1968). Rules, Praise and Ignoring: Element of Elementary Classroom Control. Journal of Applied Behavior Analysis, 2, 139-150.

McKenzie, H. S., Clark, M., Wolf, M. M., Kothera, R., & Benson, C. (1969) Behavior Modification of Children with Learning Disabilities Using Grades as Tokens and Allowances as Back-Up Reinforcers. Exceptional Children, 34, 745-752.

Nesselroad, E. M., & Vargas, J. S. (1970) The Effect of Points

Exchangeable for Grades as a Reinforcer for Study Behavior of High School Students Morgantown, Virginia: US Department of Health and Welfare, Office of Education. (ERIC Document Reproduction Service No, ED 036 674)

O'Leary, D. K., & Becker, W. C. (1967) Behavior Modification of an Adjustment Class: A Token Reinforcement Program. Exceptional Children, 33, 637-642.

O'Leary, K. D., Becker, W. C., Evans, M. B., & Saudargras, R. A. (1969) A Token Reinforcement Program in a Public School: A Replication and Systematic Analysis. Journal of Applied Behavior Analysis, 1, 3-13.

Page, E. (1958) Teacher Comments and Student Performance; A Seventy-Four Classroom Experiment In School Motivation. The Journal of Educational Psychology, 40, 173-181.

Rupley, W. H. (1976) Improving Teacher Effectiveness in Reading Instruction through the Use of Behavior Modification . (ERIC Document Reproduction Service No. 124 880)

Sechrest, L. (1963) Implicit Reinforcement of Responses. Journal of Educational Psychology, 54, 197-201.

Taffel, S. J., O'Leary K. D., & Armel, S. (1974) Reasoning and Praise: Their Effects on Academic Behavior. Journal of Educational Psychology, 66, 291-295.

Walker, M. H. & Buckley, N.K. (1968) The Use of Positive Reinforcement in Conditioning Attending Behavior. Journal of Applied Behavior Analysis, 3, 245-250.

Thomas, D. R., Becker, W. C., & Armstrong, M. (1968) Production and Elimination of Disruptive Classroom Behavior by Systematically Varying Teacher's Behavior. Journal of Applied Behavior Analysis, 1, 35-45.

Wheldall, K. , Houghton, S. & Merrett, F. (1989) Natural Rates of Teacher Approval and Disapproval in British Secondary School Classrooms. British Journal of Educational Psychology, 59, 38-48.

Whitlock, C., & Bushell, Jr., D. (1967) Some Effects of "Back-Up" Reinforcers on Reading Behavior. Journal of Experimental Child Psychology, 5, 50-57.

Wolf, M. H. (1966) Experiments with Token Reinforcement in a Remedial Classroom. U.S. Department of Health, Education & Welfare, Office of Education. (ERIC Document Reproduction Service No. 012 284)

APPENDIX

Table II

Record of Subjects' Study Behavior Across All Phases

Subject	Praise	No Praise	Praise	No Praise
Subject 1	VVV	VVV	VVV	VVV
Subject 2	VVV	VVV	VVV	OVV
Subject 3	VVV	VVV	VVV	VVV
Subject 4	VVV	OVV	VVV	VVV
Subject 5	VVV	VVV	VVV	VVV
Subject 6	VVV	VVV	VVV	VVV
Subject 7	VVV	VVV	VVO	OVV
Subject 8	VVV	OOV	VVV	VVV
Subject 9	VVV	OVV	VOV	OVV
Subject 10	VVV	OOV	VVO	OVV
Subject 11	VVV	VOV	VVV	VVV
Subject 12	VVV	VOV	VVO	VOV

Note. The "V's" denote check marks.